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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,133	07/30/2003	Jeremy John Carroll	B-5177 621118-8	1835

7590 07/24/2008

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EXAMINER	
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ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
07/24/2008	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/632,133
Filing Date: July 30, 2003
Appellant(s): CARROLL, JEREMY JOHN

Richard P. Berg
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 05/08/2008 appealing from the Office action mailed 01/10/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

20010043357	OWA et al.	11-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-8, 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa et al. (US 2001/0043357).

Regarding claims 1 and 11, Owa '357 discloses a method of assigning a print job in a printing system, the printing system comprising at least one printer and at least one computer connected to said printer(s) (fig. 1), wherein the or each printer has a plurality of different printing configurations (figs. 9a-9b) and the or each computer is capable of generating at least one print Job (printer selection section 11, fig. 2), said print job(s) having corresponding printing requirements (i.e., printer information retention means retains printer information concerning print environments of the printers; see page 1, paragraph [0010]), each printing configuration being capable of satisfying one or more printing requirements (figs. 3-4), the method comprising the steps of:

i) creating one or more print jobs (i.e., user 1 shown in FIG. 5 sets print conditions of "monochrome," "A4," "600 dpi," and "no double-sided print" and issues a print execution command of a 20-page document; see page 4, paragraph [0069]);

ii) notionally assigning the or each print job created in step i) as a notional print job assignment across one or more of the printers in such a way that the one or more of the printers have printing configurations that are capable of satisfying the printing requirements of a corresponding print job (i.e., the printer PRN4 of the four printers PRN1-PRN4 is excluded because it can not satisfy any of the print conditions assigned priority A, "monochrome," "A4," and "600 dpi." Further, the status information shown in FIG. 4 is referenced and printers PRN1 and PRN2 that cannot print 20 pages, the document feature, are excluded because not enough A4-size paper remains. Finally,

the printer PRN3 is selected as an optimum printer; see page 4, paragraph [0069]);

iii) calculating a cost for printing the or each print job according to said notional print job assignment (i.e., in this case, the printer PRN3 is printing as shown in FIG. 4. Thus, the printing for user 1 is delayed until the current printing job is complete. If the remaining A4-size paper amount in the printer PRN2 is 20 sheets or more in the status information shown in FIG. 4, the printer PRN2 rather than the printer PRN3 will be selected as an optimum printer; see page 4, paragraph [0070]);

iv) repeating steps ii) (i.e., when user 2 shown in FIG. 5 issues a print execution command of the same document as user 1 under the same print conditions; see page 4, paragraph [0071]) and iii) at least once for a at least one different notional print job assignment (i.e., a printer comprising the basic information better satisfying the condition items assigned priority B can gain a higher score, but the printer PRN2 will gain the highest score and the printer PRN1 will gain the second highest score with respect to the print location and the printer PRN3 will gain the highest score and the printer PRN1 will gain the second highest score with respect to the print speed; see page 4, paragraph [0071]);

v) selecting from the notional print job assignments according to the calculated costs a preferred assignment of the or each print job (With respect to the status information shown in FIG. 4, the printer PRN2 with the remaining paper amounting to less than the print condition is excluded and the score of the current printer PRN3 which is currently printing is reduced; thus, the printer PRN1 will be selected; see page 4, paragraph [0071]).

It is noted that Owa does not use the term cost, it is obvious to a person with ordinary skill in the art that the score is equivalent to the cost, because the score is a value giving assuring a print job is print by a particular printer by comparing the print job requirement to the print configuration. In short, the score giving to the printer obvious is a cost of printing the print job by the printer.

Regarding claims 2 and 12, Owa '357 discloses a method, in which the or each printer has a pre-existing printing configuration, and said calculation of the cost includes an assessment of the cost of any needed changes from the pre-existing configuration(s) to changed configuration(s) so that the printer(s) can satisfy the printing requirements (If the printer PRN3 is not printing, the faster printer PRN3 may be selected over the printer PRN1. In summary, the printer most satisfying the conditions desired by user 2, i.e., a printer installed at a close location and operating at high speed, is selected automatically. Thus, the user can handle a number of printers advantageously and efficiently; see page 4, paragraph [0071]).

Regarding claims 3 and 13, Owa '357 discloses a method, in which said needed changes include manual reconfiguration of at least one printer (i.e., the user can also manually enter the contents of the items in the basic information setting section 12 or the basic information setting section 12 can send an inquiry about information known by the printer itself; see page 2, paragraph [0040], fig. 2), said calculated cost then including an assessment of the cost of such a manual reconfiguration (i.e., if the

document has a large number of pages, a higher added score can be given to a printer which operates at a high print speed so that a high-speed printer is preferentially selected; see page 4, paragraph [0065]).

Regarding claims 4 and 14, Owa '357 discloses a method, in which the preferred assignment of the printing job requires a manual reconfiguration of at least one printer (i.e., if none of the printers can satisfy the criteria assigned priority A, the host computer 1 warns the user; see page 3, paragraph [0058]), in which the printing system after selection of said preferred assignment then presents to a user of the printing system instructions for manually reconfiguring said printer(s) (i.e., the priority B means that preferably the corresponding condition item is satisfied; see page 3, paragraph [0058], fig. 5).

Regarding claims 5 and 15, Owa '357 discloses a method, in which the print job is assigned to more than one printer (i.e., if it is determined at step S8 that one or more printers are to be selected; see page 3, paragraph [0063], fig. 6), and the printing system presents to a user of the printing system instructions for any or all of locating, assembling, collating, binding, or otherwise combining material printed from the printers (i.e., FIG. 5 is an illustration of an example of the printer selection conditions set in the printer selection condition setting section 15. In the figure, the condition items of color/monochrome, paper size, print resolution, double-sided print, print location, print speed, and remaining consumable amount and user-specified priority for each of the

condition items (A, B, or C) are set as the printer selection conditions; see page 3, paragraph [0058]).

Regarding claims 6 and 16, Owa '357 discloses a method, in which the print job has a plurality of different parts, each part having different printing requirements, and the print job is split according to those different requirements (i.e., the scores given to each printer are totaled and retained. The sequence is repeated until all condition items assigned priority B have been handled at step S15 (YES); see page 4, paragraph [0064], fig. 6).

Regarding claims 7 and 17, Owa '357 discloses a method, in which the calculated cost is an economic cost (i.e., if one or more printers to be selected remain, control goes to step S19 wherein the printer having the highest final score is selected as an optimum printer from among the printers determined to be selected; see page 4, paragraph [0067], fig. 6).

Regarding claim 8, Owa '357 discloses a printing system (fig. 1), the printing system comprising at plurality of printers and at least one computer (Host Computer 1, fig. 1) connected to said printers (Printer 5, 2a-2d, fig. 1), each printer of said plurality of printers having a plurality of different printing configurations (figs. 9a-9b) and the at least one computer being capable of generating at least one print job (printer selection section 11, fig. 2), said at least one print job having corresponding printing requirements

(i.e., printer information retention means retains printer information concerning print environments of the printers; see page 1, paragraph [0010]), the at least one printing configuration being capable of satisfying one or more printing requirements (figs. 3-4), wherein the printing system is arranged to calculate a cost for printing the at least one print job (i.e., user 1 shown in FIG. 5 sets print conditions of "monochrome," "A4," "600 dpi," and "no double-sided print" and issues a print execution command of a 20-page document; see page 4, paragraph [0069]) according to different notional assignments of the at least one print job across one or more of the printers in such a way that said printers have printing configurations that are capable of satisfying the printing requirements (i.e., the printer PRN4 of the four printers PRN1-PRN4 is excluded because it can not satisfy any of the print conditions assigned priority A, "monochrome," "A4," and "600 dpi." Further, the status information shown in FIG. 4 is referenced and printers PRN1 and PRN2 that cannot print 20 pages, the document feature, are excluded because not enough A4-size paper remains. Finally, the printer PRN3 is selected as an optimum printer; see page 4, paragraph [0069]), and to select according to the calculated costs a preferred assignment of the or each print job (i.e., in this case, the printer PRN3 is printing as shown in FIG. 4. Thus, the printing for user 1 is delayed until the current printing job is complete. If the remaining A4-size paper amount in the printer PRN2 is 20 sheets or more in the status information shown in FIG. 4, the printer PRN2 rather than the printer PRN3 will be selected as an optimum printer; see page 4, paragraph [0070]); and wherein the at each printer has a pre-existing printing configuration and said calculation of the cost includes an assessment of the cost of any

needed changes from the pre- existing printing configurations to changed printing configurations so that the printers can satisfy the printing requirements (If the printer PRN3 is not printing, the faster printer PRN3 may be selected over the printer PRN1. In summary, the printer most satisfying the conditions desired by user 2, i.e., a printer installed at a close location and operating at high speed, is selected automatically. Thus, the user can handle a number of printers advantageously and efficiently; see page 4, paragraph [0071]).

It is noted that Owa does not use the term cost, it is obvious to a person with ordinary skill in the art that the score is equivalent to the cost, because the score is a value giving assuring a print job is print by a particular printer by comparing the print job requirement to the print configuration. In short, the score giving to the printer obvious is a cost of printing the print job by the printer.

(10) Response to Argument

Appellant, on the top of page 7, brief, argues that Owa's points are not cost related, Rather they are related to whether or not printer can handle the job at all, not whether it can handle the job in a cost efficient manner; and Owa does not teach selecting from the notional print job assignments according to the calculated costs a preferred assignment of the or each print job.

In response: Appellant discloses on top of page 4, specification, that the calculation of cost may be according to pure economic cost. However, it should be appreciated that such costs may be other than pure economic costs, dictated by, for

example, user requirements not readily rendered in financial terms. Therefore, efficiency would be and can be viewed as a cost. The more efficiently a print job is processed, the lower the cost is to the user and print shop.

Page 4, paragraph [0063], Owa, teaches calculation of a score base on printer information and user print condition (user requirement). The score is given to a printer. A printer with the highest score will be selected (page 4, paragraph 67). In other words, if a user want to print a print job using printer A, base on printer A's capability and user's requirement, a score would be given. If a user want to print a print job using printer B, a score would be given to the combination of print job requirement and printer B's capability. At the end, the printer with the highest score (be able to process the print job more efficiently) would be selected base on the score. Furthermore, the score would also be based on the printer speed, printer location, (page 4, page 5, paragraph 71).

Paragraph 8, Owa states: "in recent years, documents has been increasingly diversified, thus conventional printing of the whole document at one printer is wasteful operation and lowers the printing efficiency of the printing system." Wasteful operation equals higher cost and lower efficiency. Owa's invention is used to solve such a problem. Therefore, Owa's point/score system is in fact cost related.

Note: Owa's optimum printer selection method can also be applied in page units (paragraph 73).

Appellant, on the top of page 8, brief, argues that Owa does not suggest allocating points on basis recited by "in which the or each printer has a pre-existing printing configuration, and said calculation of the cost includes an assessment of the

cost of any needed changes from the pre-existing configuration(s) to changed configuration(s) so that the printer(s) can satisfy the printing requirements".

In response: Paragraph 63, 64 teaches a high score would be given to a "yes" to step 11 and step 11 is checking whether basic information of printer such as paper size, number of paper left, (paragraph 69) can satisfy the user print condition.

Clearly when a printer don't has enough paper to print a print job, the score would be lower and when the printer is changed by adding more paper such that user print condition is satisfied would receive a higher score. Therefore, calculated score does include an assessment of the cost of any needed changes from the pre-existing configuration(s) to changed configuration(s) so that the printer(s) can satisfy the printing requirements.

Appellant, on the top of page 9, brief, argues that Owa does not suggest allocating points on which said needed changes include manual reconfiguration of at least one printer, said calculated cost then including an assessment of the cost of such a manual reconfiguration.

In response: Paragraph 63, 64 teaches a high score would be given to a "yes" to step 11 and step 11 is checking whether basic information of printer such as paper size, number of paper left, (paragraph 69) can satisfy the user print condition.

Clearly when a printer don't has enough paper to print a print job, the score would be lower and when the printer is changed by manually adding more paper (people do it all the time) such that user print condition is satisfied would receive a higher score. Therefore, allocating points on which said needed changes include

manual reconfiguration of at least one printer, said calculated cost then including an assessment of the cost of such a manual reconfiguration.

Appellant, on the top of page 10, brief, argues that Owa does not teach presenting *to* a user of the printing system instructions for manually reconfiguring said printer(s).

In response: Page 2 paragraph 35, 40, teaches presenting printer information to a user or administrator.

When a user know a printer, for example, run out of paper or run out of paper of a particular size and the user still need to use the printer to print the size as desired by the user, the user would have to add the right paper to the printer. Therefore, the out of paper status of a printer is information presented to the user to reconfigure the printer with the paper.

Appellant, on the top of page 11, brief, argues that Owa does not teach the print job has a plurality of different parts, each part having different printing requirements, and the print job is split according to those different requirements.

In response: Page 5, paragraph 75, 76 teaches the print job has a plurality of different parts (different page), each part having different printing requirements (color or monochrome), and the print job is split according to those different requirements (paragraph 77).

Appellant, on the bottom of page 11, brief, argues that Owa has no such teaching the calculated cost is an economic cost.

In response: Paragraph 8 states: "in recent years, documents has been increasingly diversified, thus conventional printing of the whole document at one printer is wasteful operation and lowers the printing efficiency of the printing system." Wasteful operation equals higher economical cost and lower efficiency. Owa's invention is used to solve such a problem. Therefore, Owa's point/score system ais in fact economical cost related - the higher the score, the lower wasteful operation, the lower economical cost.

Appellant, on the bottom of page 12, brief, argues Owa does not recite limitations concerning the cost for printing and the selection of according to the calculated costs a preferred assignment of each print job.

In response: Page 4, paragraph [0065], Owa, teaches the output destination printer selection section 11 corrects the total score of each of the printers to be selected based on the document features retained in the document feature extraction section 16. For example, if the document has a large number of pages, a higher added score can be given to a printer which operates at a high print speed so that a high-speed printer is preferentially selected. Also, if the document contains a complicated image, a higher added score can be given to a printer having a high-level command processing capability so that the score of the high-level command processing printer is increased. The total score that each printer gains is thus corrected at step S16 in response to the document features.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Allen H Nguyen/

Examiner, Art Unit 2625

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